THE SCOPE

MAGAZINE OF NAVAL MEDICAL RESEARCH & DEVELOPMENT

October 2021

DOWN UNDER

NMRC Researchers Utilize a Unique Study Platform to Examine Multiple Diseases in Australia

#1

FIRST ISSUE

THE SCOPE

MAGAZINE OF NAVAL MEDICAL RESEARCH & DEVELOPMENT

Issue 1 October 2021

Editor's Desk

Hello and welcome to THE SCOPE. The first issue of the Magazine of Naval Medical Research & Development. My hope is to capture the people, the missions and successes of NMR&D. Along with my fellow public affairs professionals, our goal is to deliver this in a new and exciting way. I'm very interested in your feedback, criticisms, photo submissions and ideas. If you have time, drop me a line or give me a call. You can also reach out to your PAO to coordinate stories and event coverage. I look forward to gaining your readership.

Special thanks to this issue's contributors; André Sobocinski, CDR Kathryn Barnes and HMC Jan Marayag.

-Tommy Lamkin

The Scope Issue 1 is published by
Naval Medical Research Center Public Affairs
503 Robert Grant Ave, Silver Spring, Maryland 20910

THE SCOPE

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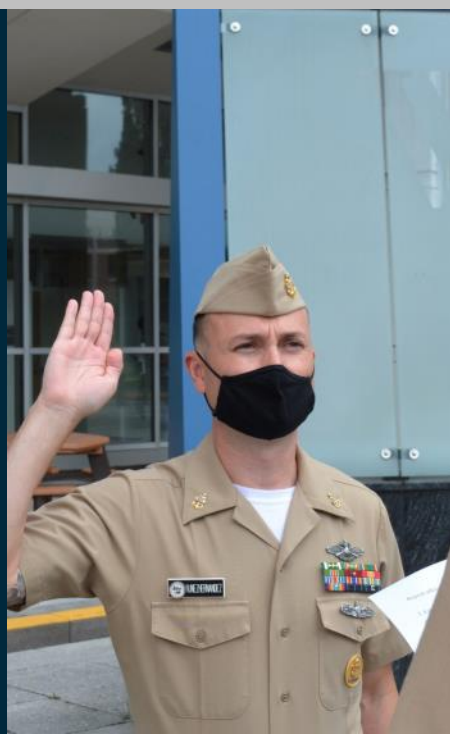

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On the Cover:

U.S. Marine Corps Sgt. Jason Jones, a squad leader, left, Lance Cpl. Andrew Morabito, a gunner, center, and Cpl. Cory Osterloh, a gunner, all with Alpha Battery, 2nd Low Altitude Air Defense Platoon, Marine Medium Tiltrotor Squadron - 363 (Reinforced), Marine Rotational Force - Darwin, await the start of a live-fire range utilizing FIM-92 Stinger missiles at Bradshaw Field Training Area, NT, Australia, Sep. 3, 2021. (U.S. Marine Corps photo by Cpl. Lydia Gordon)

SILVER SPRING, Md. (Sept. 1 2021) HMCS Edgar Nuñez Hernández, NMRC's senior enlisted leader re-enlists for another four years in the U.S. Navy.

NMRC Researchers
Honored For Commitment to Warfighters

Pictured from left to right NMRC's CHARM Team, from left to right; HMC Jan Marayag, LCDR Brian Pike, CDR Andrew Letizia, CAPT Carl Goforth, HN Nicole Cross, HM2 Raphael Claxton, HM2 Christopher Moore, HMCS Edgar Nunez-Hernandez, LT Dawn Weir, HM1 Ernesto Santa Ana

"Researchers and medical providers throughout the DOD continue to demonstrate their impressive talents and leadership, responding to the COVID-19 pandemic"

Via health.mil

While the pandemic may have sidelined the 2021 Military Health System Research Symposium (MHRS), notable accomplishments by military and civilian researchers were recognized by the meeting's organizers through a number of awards.

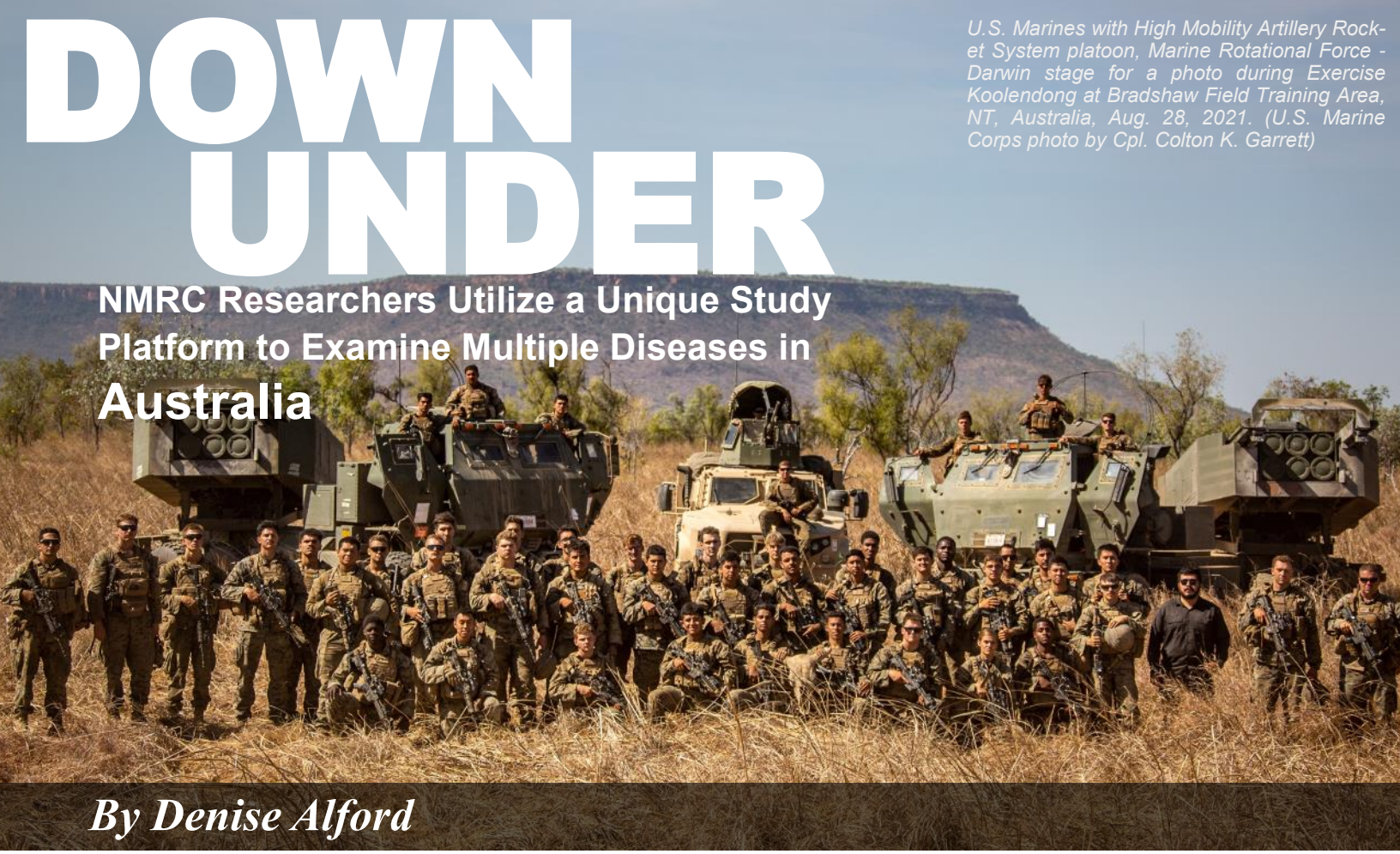
MHSRS awards honor excellence in medical warfighter-related research at this annual meeting, which is sponsored by the Department of Defense Assistant Secretary of Defense for Health Affairs. Normally, the symposium would bring together thousands of health care professionals, researchers, and DOD leaders to review the latest scientific advancements in Warfighter-related, DOD-sponsored medical research pursued across the entire military medical enterprise. However, due to the ongoing national emergency surrounding COVID-19, this year's conference was canceled.

"Researchers and medical providers throughout the DOD continue to demonstrate their impressive talents and leadership, responding to the COVID-19 pandemic while continuing to conduct research into the health and well-being of our nation's warfighters," said Terry Adirim, acting assistant secretary of defense for health affairs. "Readiness remains our top priority while we remain committed to ensuring the health and welfare of our service members, their families, and retirees. These remarkable individuals and teams are to be commended for their devotion to military medicine."

The first team award recipient was the COVID-19 Health Action Response for Marines (CHARM) Team, Naval Medical Research Center in Silver Spring, Maryland. The team lead was Navy Cmdr. Andrew G. Letizia. In March 2020, after multiple companies were delayed in graduating from the Marine Corps Recruit Depot Parris Island because of SARS-CoV-2, understanding and containing the spread of COVID-19 in the recruit setting became a matter of national security. The CHARM study team executed the largest prospective study of SARS-CoV-2 among Active Duty Service Members in the DOD, enrolling 3,472 recruits. The team provided actionable public health data to the Marines and saved thousands of recruit training hours. The results have paved the way for new diagnostic, prognostic, and therapeutic products. ■

DOWN UNDER

NMRC Researchers Utilize a Unique Study Platform to Examine Multiple Diseases in Australia



U.S. Marines with High Mobility Artillery Rocket System platoon, Marine Rotational Force - Darwin stage for a photo during Exercise Koolendong at Bradshaw Field Training Area, NT, Australia, Aug. 28, 2021. (U.S. Marine Corps photo by Cpl. Colton K. Garrett)

By Denise Alford

Marines deploying to remote areas of Australia encounter numerous diseases not commonly found in North America. One of the diseases is Burkholderia pseudomallei (B. pseudomallei) which causes the disease melioidosis.

A team of researchers from Naval Medical Research Center (NMRC) began conducting an observational study to understand the disease risks associated with B. pseudomallei to service members deployed to Australia. The team works in collaboration with Dr. Bart Currie of the Menzies School of Health Research, headquartered in Darwin and one of the world's foremost authorities on melioidosis.

U.S. Marines have been deploying to Australia since 2012 as part of Marine Rotational Force-Darwin (MRF-D) to participate in joint training exercises. According to the center for Disease Control (CDC) Australia is one of the countries with the greatest number of cases of Melioidosis.

B. pseudomallei is a pathogen of humans and animals that enters the body through skin abrasions, burns, or wounds infected by contaminated soil or through inhalation of contaminated dust. Melioidosis is not contagious and can take different forms from localized skin infection to an infection of the lungs associated with high fever, headache, chest pain, and coughing, as well as infection of bones and pus-filled abscesses in the skin, lungs, or other organs. Acute melioidosis is characterized by a rapid onset while chronic melioidosis is characterized by symptoms lasting longer than two months.

"This is the first major presence of U.S. forces in a B. pseudomallei endemic area since the Vietnam War."

The study's principle investigator, Dr. Kevin Schully, from NMRC's Biological Defense Research Directorate has a wealth of experience in human clinical studies. He has studied B. pseudomallei for 14 years and was inspired to follow the MRF-D rotations since learning of their existence in 2014.

"It was important to understand the risks to MRF-D. This is the first major presence of U.S. forces in a B. pseudomallei endemic area since the Vietnam War. During that time, there were hundreds of melioidosis cases that we know of and numerous dormant infections that manifested years later," said Schully.

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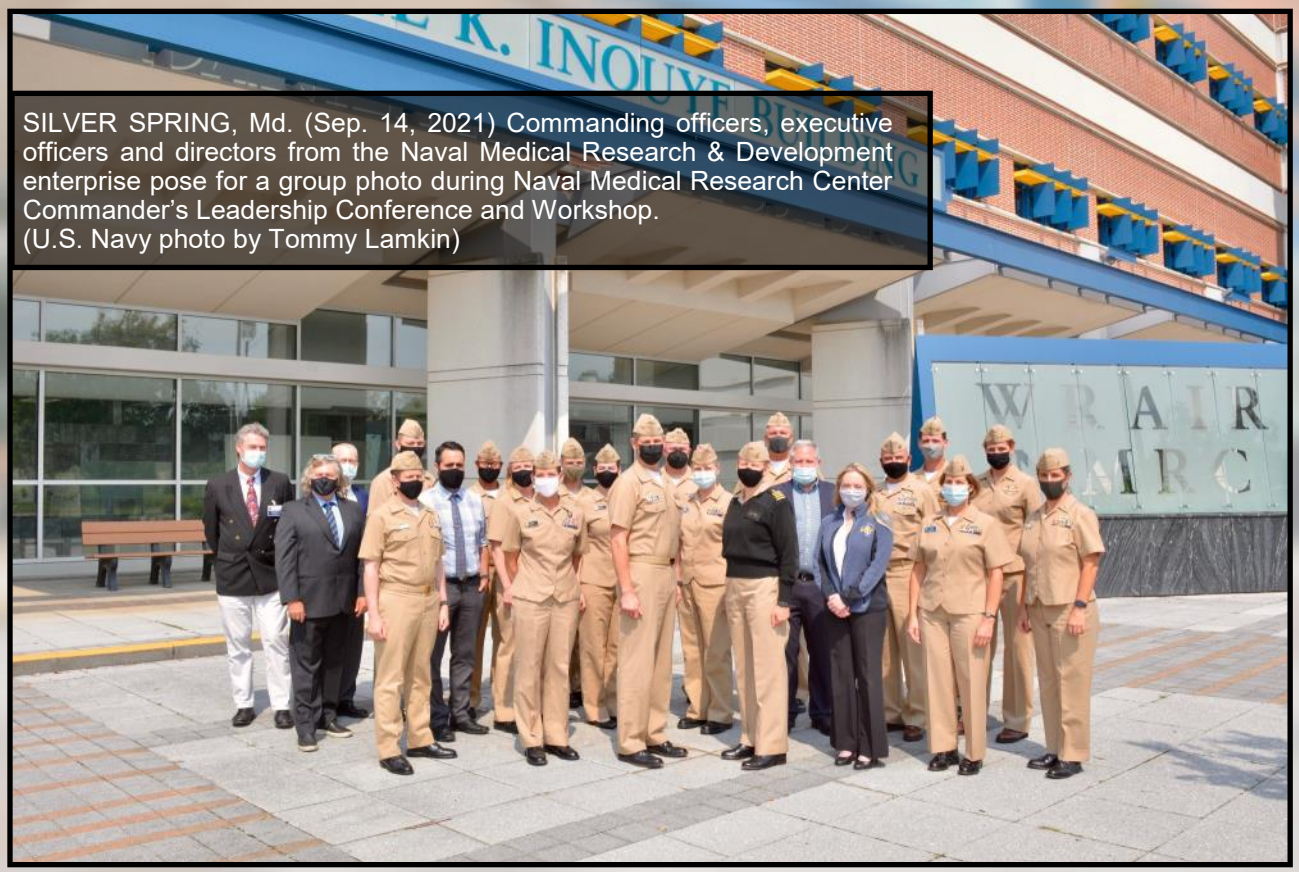
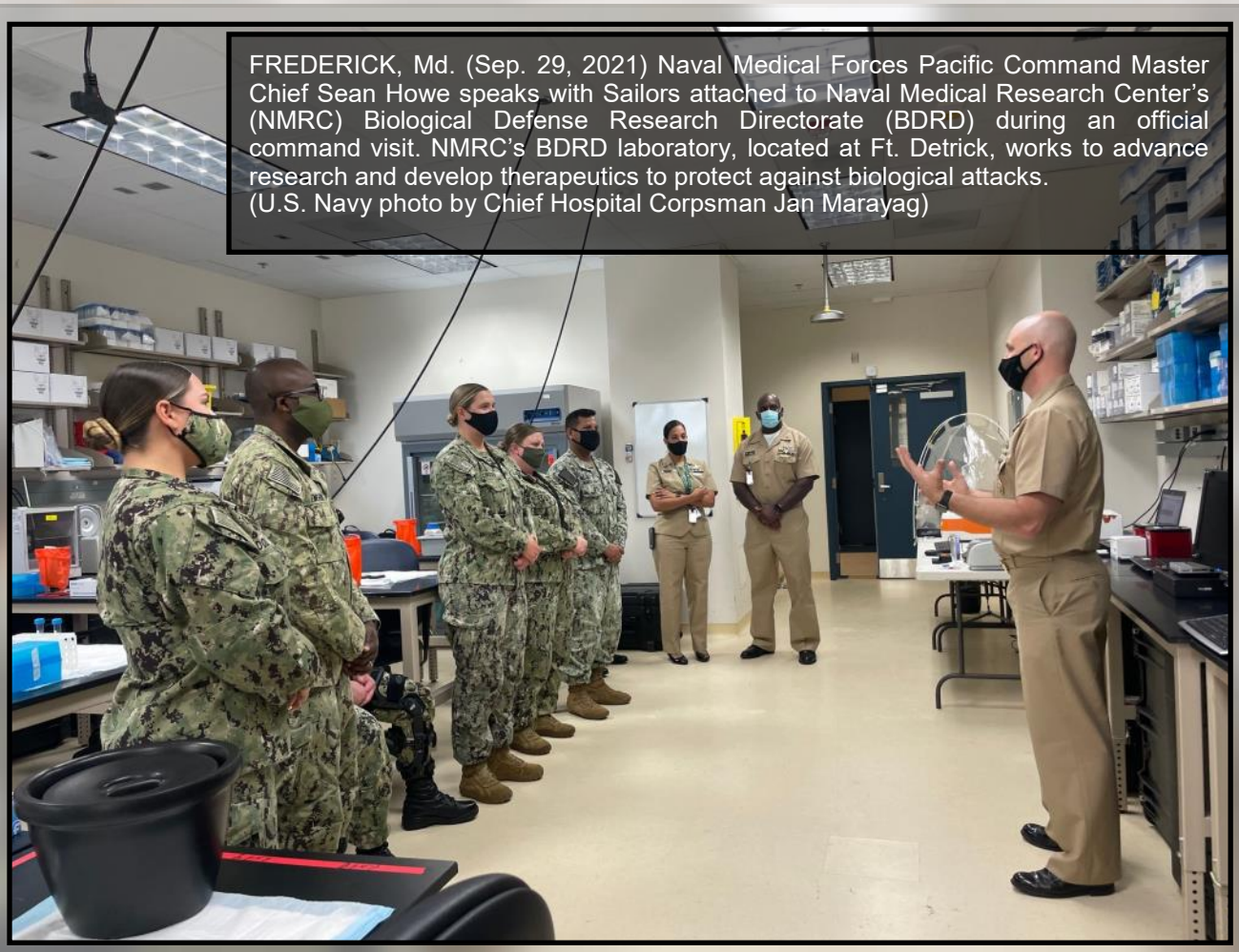


SILVER SPRING, Md. (Sep. 14, 2021) Commanding officers, executive officers and directors from the Naval Medical Research & Development enterprise pose for a group photo during Naval Medical Research Center Commander's Leadership Conference and Workshop.
(U.S. Navy photo by Tommy Lamkin)



FREDERICK, Md. (Sep. 29, 2021) Naval Medical Forces Pacific Command Master Chief Sean Howe speaks with Sailors attached to Naval Medical Research Center's (NMRC) Biological Defense Research Directorate (BDRD) during an official command visit. NMRC's BDRD laboratory, located at Ft. Detrick, works to advance research and develop therapeutics to protect against biological attacks.
(U.S. Navy photo by Chief Hospital Corpsman Jan Marayag)

OID

RESEARCH TEAM WINS OUSTANDING ACHIEVEMENT AWARD

NHRC's Operational Infectious Diseases Laboratory Team Recognized for COVID Pandemic Related Accomplishments

By John Marciano

The Naval Health Research Center's (NHRC) Operational Infectious Diseases Directorate (OID) has been operating at high tempo, in the fight against the COVID-19 pandemic from the very beginning. The Directorate houses the first Department of Defense (DoD) laboratory to be approved by the U.S. Centers for Disease Control & Prevention (CDC) to conduct COVID-19 testing.

"Implementation of these strategies allowed for increased throughput and decreased turnaround time"

To date, the OID laboratory team has conducted more than 50,000 diagnostics tests, allowing U.S. military operational forces to deploy safely and continue their critical mission. In addition to many significant achievements, the OID laboratory team was recently recognized by the Military Health System Research Symposium (MHSRS) for *COVID Pandemic-related Outstanding Research Accomplishment -SARS-CoV-2.*

Acknowledged as the DoD's premier scientific annual meeting, the MHSRS awards committee recognized the collaborative effort of NHRC's OID laboratory, and the Joint Program Executive Office for Chemical Biological Radiological and Nuclear Defense (JPEO CBRND), who performed two large studies for the White House COVID-19 Task Force and U.S. Pacific Fleet. The team evaluated pooled specimen strategies for COVID-19 testing that increased the number of specimens tested in a given time while sparing valuable and, in early Pandemic, scarce reagents and supplies. Data from these two studies led to two U.S. Food and Drug Administration (FDA) Emergency Use Authorizations (EUAs) for diagnostic pooling of specimens for two major commercial testing platforms, the BioFire FilmArray and the Cepheid GeneXpert. Both platforms are broadly distributed throughout all military services and multiple roles of care.

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NSMRL LT: MHSRS Award Winner

GROTON, Conn. (Feb. 26, 2021) Lt. Chad Peltier poses with Naval Submarine Medical Research Laboratory (NSMRL) Commanding Officer Capt. Katharine Shobe after being recognized as the 2020 Medical Service Corps Research Psychologist of the Year during an all-hands ceremony. This award came in advance of his MHSRS Outstanding Research Accomplishment/Individual/Military Award in Sept. 9, 2021. (U. S. Navy Photo by Capt. Brian Feldman/Released)

By Erica Casper

Lieutenant Chad Peltier, PhD, a research psychologist at the Naval Submarine Medical Research Laboratory (NSMRL) is the 2021 winner of the Outstanding Research Accomplishment/Individual/Military award at this year's Military Health Services Research Symposium (MHSRS).

The winners were announced on the MHSRS website on Sept. 9. The award recognizes "outstanding research contributions by an individual research scientist with the focus on significant accomplishments of high impact during the past year."

Peltier led multiple critical command programs related to psychological screening, resiliency, and cognitive performance, all of which are essential to the success of submariners and the mission.

> *"a testament to his sustained performance"*

One of Peltier's most visible roles was as lead of NSMRL's submariner psychological screening effort, which assesses the psychosocial suitability and environmental fit for every enlisted Sailor and Officer while they are at Submarine School.

Peltier worked as a research psychologist at NSMRL until June 2021, when he detached from the Navy to pursue his law degree. Peltier is the third military service member from NSMRL to win this award. Previous awardees were Lt. Luke Beardslee (2020) and Lt. Jay Haran (2016).

Peltier's receipt of this award is "a testament to his sustained performance in the Warfighter Performance Department at NSMRL," said Capt. Katharine Shobe, NSMRL commanding officer.

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Dr. Kevin Schully from Naval Medical Research Center's Biological Defense Research Directorate holds a recruitment session at Marine Corps Air Ground Combat Center Twentynine Palms to provide information and answer questions to Marine Rotational Force-Darwin (MRF-D) (Photo Credit Mr. Mark Salvador)

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"We are very cognizant of the level of seriousness that the Northern Territory of Australia takes in preventing and mitigating infectious disease, especially in light of their handling of the COVID-19 pandemic during our last two rotations. We have remained compliant with all regulations set forth by NT Health and remain committed to maintaining the safety of the community in which we live and work," said Col. David Banning, MRF-D commanding officer

Biosurveillance is a key component of the military's approach to prevent infections during deployments. Vector surveillance is credited for characterizing the threat of leishmaniasis to coalition forces in Iraq, where mitigation strategies dramatically decreased the incidence of leishmaniasis cases.

Recently the CDC reported cases of melioidosis in the United States. This could be an indication of a new emergence of this disease and sheds light on the importance of infectious disease research and surveillance.

Since the beginning of the study, NMRC has followed five rotations of MRF-D Marines and Sailors from 2016-2020 to study B. pseudomallei risks and is currently following the 2021 rotation. 1,488 voluntary participants provided blood samples before, during and after the deployment.

"There was one serious B. pseudomallei infection in MRF-D so far and there have also been numerous asymptomatic infections. The analysis is ongoing so we are unable to attach an exact number right now," said Schully. Melioidosis is not contagious but because of its ability to lie dormant for long periods of time, it is important to understand the frequency with which MRF-D participants are experiencing these asymptomatic infections.

"We are very cognizant of the level of seriousness that the Northern Territory of Australia takes in preventing and mitigating infectious disease,"

Force Health Protection measures are essential and in place to protect service members overseas. The study protocol is structured to allow the addition of surveillance studies for other diseases. The study was expanded to include Ross River Virus (RRV), Australia's most common and widespread mosquito-borne pathogen along with Coxiella burnetti C. burnetti is also found in Australia. Both C. burnetti and B. pseudomallei are categorized as "Category B bio-terrorism agents by the CDC increasing the importance of including them in the research.

"Our medical readiness is absolutely critical to maintaining an operational capable force, ready to respond to crises and contingencies in the Indo-Pacific region. Our robust medical staff are essential for ensuring the Marines and Sailors of Marine Rotational Force - Darwin are cared for and medically prepared to carry out their duties," added Banning.

The global pandemic had a significant effect on the study and NMRC included SARS-CovV-2 testing. Pre-COVID, the MRF-D participants arrived and left at the same time. Due to COVID restrictions, the MRF-D participants arrived in waves followed by 14-day quarantine periods creating a challenge for the research team in comparing the different groups. Due to restrictions the team was not permitted to travel to Australia to continue the study there.

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SAN ANTONIO (Oct. 14, 2021) – Dr. Luis Martinez, of San Angelo, Texas, a research microbiologist, assigned to the Biomaterials Department, Craniofacial Health and Restorative Medicine Directorate, Naval Medical Research Unit (NAMRU) San Antonio, is a representation of the highly professional and diverse civilian workforce within the Department of the Navy. (U.S. Navy photo by Burrell Parmer/Released)

NAMRU San Antonio Highlights

Dr. Luis Martinez

During National Hispanic Heritage Month

THE SCOPE

SAN ANTONIO (Oct. 14, 2021) Dr. Luis Martinez, of San Angelo, Texas, a research microbiologist assigned to the Biomaterials Department, Craniofacial Health and Restorative Medicine (CHRM) Directorate, Naval Medical Research Unit (NAMRU) San Antonio, speaks with CHRM Director Dr. John Simecek regarding the evaluation of the DXR™ Raman microscope to identify bacteria of dental interest in different fluid matrices at NAMRU San Antonio headquarters. (U.S. Navy photo by Burrell Parmer/Released)

By Burrell Parmer

National Hispanic Heritage Month marks a time to showcase and honor the many contributions Hispanic Americans have made to the Department of Defense (DoD) and the nation.

For Naval Medical Research Unit (NAMRU) San Antonio, Dr. Luis Martinez, a research microbiologist, assigned to the Biomaterials Department, Craniofacial Health and Restorative Medicine Directorate, is a representation of the highly professional and diverse civilian workforce within the Department of the Navy.

Born in San Luis Potosi, Mexico, and raised in San Angelo, Texas, Martinez begin working at NAMRU San Antonio as a contractor becoming a federal employee in 2018.

According to Martinez, who has been a microbiologist for 18 years, the most rewarding part of his job is knowing that the research conducted at NAMRU San Antonio may help combat medics in the field to stabilize casualties. NAMRU San Antonio's mission is to conduct gap driven combat casualty care, craniofacial, and directed energy research to improve survival, operational readiness, and safety of DoD personnel engaged in routine and expeditionary operations.

"I liked the type of research being conducted in the command as well as its mission," said Martinez, who earned his doctorate from the University of Texas Health Science Center at San Antonio. "The work being done here benefits the members of the military who serve in combat."

Another reason why he enjoys being with NAMRU—San Antonio is being part of a team.

"Being here has afforded me the opportunity to work in a different field from microbiology and learn from other scientists making me a better-rounded scientist," said Martinez, the 2015 recipient of the NAMRU-SA Gold Star of Excellence in Scientific Writing, and a Civilian of the Quarter in 2020. "While at NAMRU-SA, I have been involved in numerous research projects, which have been published in high-impact journals."

During his time with NAMRU San Antonio, Martinez's ultimate goal is to produce an innovative wound dressing to treat traumatic injuries and burns, thus enhancing the survival of injured warfighters.

"The work being done here has real world use to benefit the members of the military," said Martinez. "Working in a team atmosphere, and remembering that we are here to accomplish the mission is highly valued."

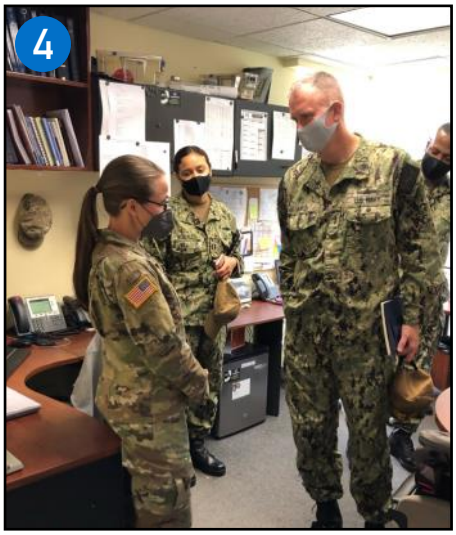
Being a part of the Navy has made Martinez realize that there are other career options for PhD holders that do not involve becoming a professor in academia.

"I was fortunate to have two parents who pushed me to pursue whatever career I chose, and were supportive," said Martinez. "I was also fortunate to find mentors in my career field who have guided me and advised me." ■

Commander, U.S. Naval Forces Southern Command/Commander, U.S. Fourth Fleet Visits Peru

Photos by Cmdr. Kathryn Barnes

LIMA, Peru (Oct.1, 2021) Lt. Cmdr. Ryan Larson, attached to Naval Medical Research Unit 6 (NAMRU-6) briefs Rear Adm. Jim Aiken, commander, U.S. Naval Forces Southern Command/ U.S. 4th Fleet on the command's laboratory capabilities during an official command visit. NAMRU-6 conducts biomedical research in infectious disease in support of global health.



(1) Lt. Cmdr. Christie Joya briefs parasitology capabilities. (2) Capt. Franca Jones, NAMRU-6 commanding officer presents a command coin. (3) Lt. Cmdr. Walter Covin, Cmdr. Daniel Ford, (U.S. Embassy) Chief Master-at-Arms Jack Coon, Cmdr. Kathryn Barnes and Jones pose for a photo with Aiken and Command Master Chief Robert Florentino (4) Maj. Jessica Buchta briefs animal research capabilities.

HIT THE DECK

By Tommy Lamkin

While some NMRC staffers look to coffee for a boost of mid-day energy, Sailors in the Command Suite opt for a more natural wake-me-up. If exercise creates energy, Capt. Abigail Yablonsky brewed a fresh batch with a workout challenge of daily forearm planks. To rise to this challenge, these Sailors had to hit the deck —forearms first.

A plank is a core strength exercise. Much like a pushup, sans actual pushing, the goal is to stay upright and hold it.

This month, Lt. Brian Williams, NMRC's command fitness leader joined the ranks of planks.

In unison, they all go up. After a few minutes and one by one, bodies fall in total exhaustion. Only two remain in the plank position. Williams' arms shake as the stopwatch ticks. These few minutes are intense.

In the world of Navy fitness, the forearm plank has replaced the old-fashioned curl-up in the semi-annual Physical Readiness Test (PRT). The youngest of Sailors will need to hold the plank position for 3 minutes and 40 seconds to achieve an outstanding score.

Williams recommends utilizing a progressive abdominal exercise regimen that includes planks as part of the workout. He also recommends engaging all core muscles during PT sessions. For many, routine practice will be important.

"If sailors have not yet begun training to achieve their goals on the PRT, there is no better day than today to start," said Williams. According to researchers with the Naval Health Research Center, the forearm plank is a better test of core strength and abdominal muscular endurance than the sit-ups of the past. Yablonsky's plank challenge aims to prepare Sailors for the PRT change. These challenges can also be a fun, team-building exercise.

This fall will be the first PRT, fleet-wide since the start of the COVID-19 pandemic last year. Sailors who do not meet the mini-mum plank requirements for the upcoming PRT will not receive a "fail" as long they pass the other portions. The plank will be officially scored starting in 2022. ■

NAMRU-3 Crew Finds SUCCESS and Opportunities

SIGONELLA, Italy (July 29, 2021) Capt. Marshall Monteville, commanding officer Naval Medical Research Unit 3 presents a frocking letter to Senior Chief Personnel Specialist Dwayne Smith during a frocking ceremony. Courtesy by photo by Kay Monteville.

By Tommy Lamkin

From the hills of Sicily and outward to Ghana, Egypt and Djibouti, U.S. Naval Medical Research Unit (NAMRU) No 3 has a vast geographic footprint. The unit is small with just 16 service members attached. Of these Sailors, five have been selected for promotion in 2021.

Lt. Cmdr. Stephen Eggan, NAMRU -3's science director was selected for commander, Lt. Emily Stefanov and Lt. Chaselynn Watters were selected to the rank of lieutenant commander. Senior Chief Personnel Specialist Dwayne Smith, the command's senior enlisted leader received his star in July and most recently, Logistics Specialist 1st Class Remon Azer, was selected to the rank of chief petty officer.

"I am exceptionally proud of our staff, their dedication to the mission, and their career progression. Their selection for promotion is a testament to their valued and recognized work across the CENTCOM, AFRICOM, and EUCOM areas of responsibility, said Capt. Marshall Monteville, NAMRU-3's commanding officer. "The force health protection efforts and direct support of the warfighter has been stellar, especially during this ongoing pandemic with many being forward deployed to Djibouti and aboard the USS Hershel "Woody" Williams (ESB 4), in support of Operational Risk Reduction and sovereign immunity efforts."

"At first I was shocked and surprised, then felt relief," said Eggan, the son of an Airman and graduate of the University of Pittsburgh. "It is becoming so challenging to select these days, especially for health care scientists. I am so honored and humbled to have been selected for commander."

Eggan, who has three tours within the Navy Medicine research and development enterprise, plans to pursue an executive medicine track and apply for officer-in-charge/ executive officer consideration.

Lt. Cmdr. Stephen Eggan and wife Brittanie visiting Prague.

"I continue to be amazed by the mission and what the enterprise can accomplish and I would love to stay in the R&D family."

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LOOKING Aft

with André B. Sobocinski
Historian, Bureau of Medicine and Surgery

NAMRU-3's First Fight: Navy Medicine and the Egyptian Cholera Epidemic of 1947

On September 21, 1947, a man was admitted to the Al-Qurayn Hospital in Egypt vomiting profusely and suffering severe diarrhea. Within hours he was dead. The attending physician on duty first suspected food poisoning before 11 additional patients were admitted with identical symptoms. Their diagnosis was cholera, a deadly bacterial disease that can result in death within hours if not treated.

Over the next six months cholera spread across 2,270 towns in Egypt killing over half of its victims.

As this public health threat was rapidly developing into a crisis, CDR Robert Phillips was settling in as the new commanding officer of the Naval Medical Research Unit No. 3 (NAMRU-3) in Cairo, Egypt. At 41-year old Phillips was a seven-year veteran of the Navy whose career included a tour as a medical researcher at the U.S. Typhus Commission field activity then located at the Abbassia Fever Hospital in Cairo. When the Commission's field activity closed in 1945, the Bureau of Medicine and Surgery (BUMED) assumed control over its spaces using it as the home for Navy Epidemiological Unit # 50 before establishing NAMRU-3 there in January 1946. The laboratory's primary mission: to work in conjunction with the Egyptian government in "research in tropical diseases endemic in the Middle East."

NAMRU-3's status in Egypt in those first two years could be described as tenuous. And in 1947 the laboratory was still operating without an official agreement from its host nation. When Dr. Nagib Iskander, the Egyptian Minister of Health, visited NAMRU-3 on September 24, 1947, Phillips may have suspected a formal request to disestablish the lab. Instead, Iskander asked Phillips for assistance in fighting cholera.

Seeing a golden opportunity to prove the NAMRU-3's worth, CDR Phillips immediately wired BUMED with a request for anti-cholera vaccine and necessary drugs for treating the disease. Within 24 hours, BUMED tapped into its medical supply depot in Brooklyn, N.Y. (a forerunner of the Naval Medical Logistics Command) and arranged for "10,000 pounds of critically needed vaccine, plasma and other medical supplies" to be flown to Cairo. Additional supplies were provided by the U.S. Army, Great Britain, India and the Republic of China.

Supplies were taken to NAMRU-3 where personnel—working in tandem with the Abbassia Fever Hospital—began vaccinating the local population. NAMRU-3 also sent field teams to vaccinate schools and shared supplies with the government for distribution throughout Egypt. It is estimated that NAMRU-3 personnel inoculated 1,000 people a day over the next month.

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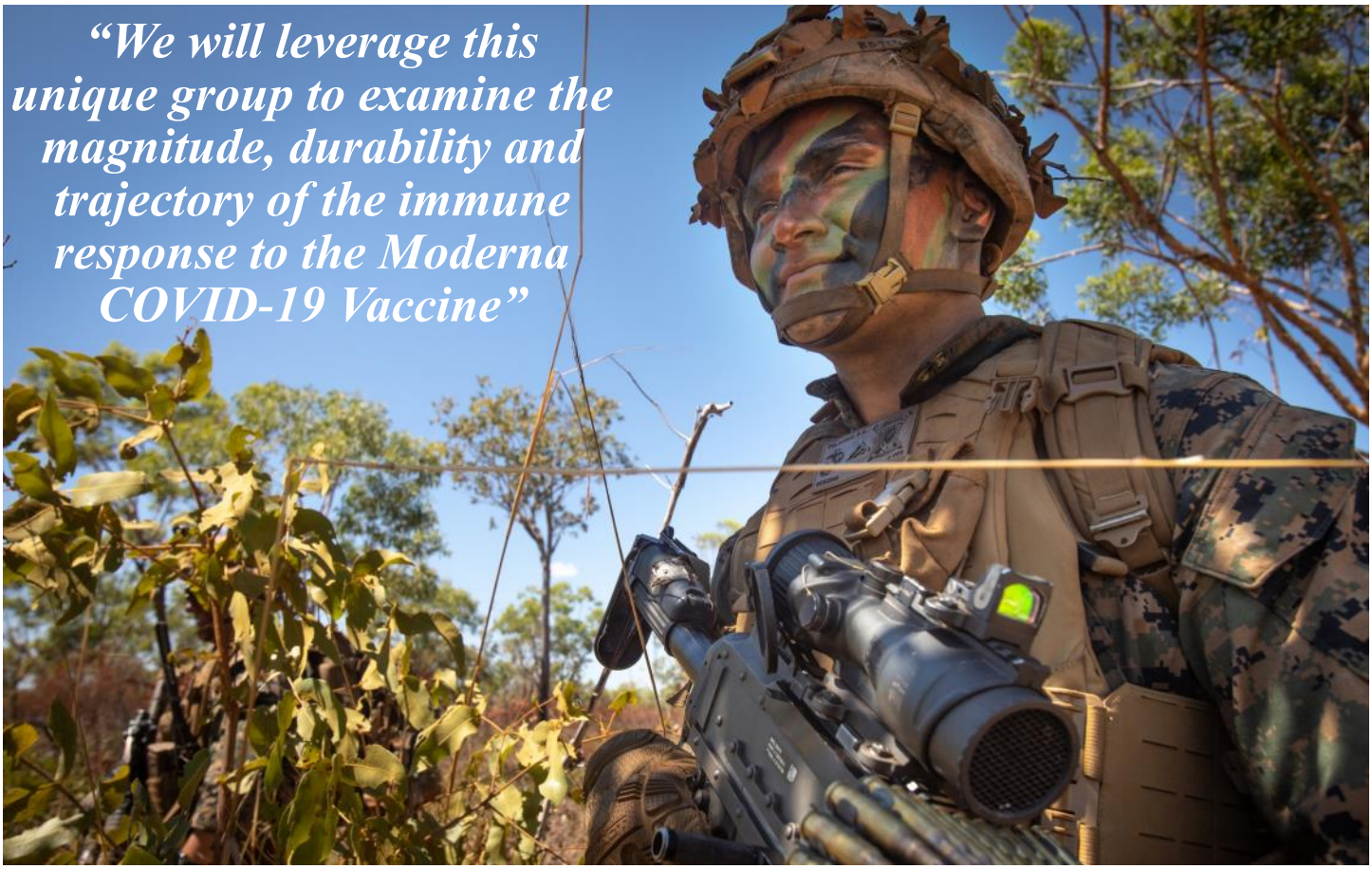
Dr. Phillips (4th from left) with Navy Surgeon General, Rear Admiral Clifford Swanson (2nd from left) with cholera patient at the Abbassia Fever Hospital in 1947.


"We will leverage this unique group to examine the magnitude, durability and trajectory of the immune response to the Moderna COVID-19 Vaccine"

U.S. Marine Corps Lance Cpl. Byron Delacruz, a rifleman with Company B., 1st Battalion, 7th Marine Regiment (Reinforced), Marine Rotational Force - Darwin, holds his position during an airfield seizure at Bradshaw Field Training Area, NT, Australia, Aug. 12, 2021. (U.S. Marine Corps photo by Sgt. Micha Pierce)

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"They also have different experiences while they are there. Each rotation usually has elements in a variety of training areas around Australia. Since the pandemic, the MRF-D members are restricted to Darwin and the Northern Territory. It will be difficult to compare results from these rotations to the earlier ones," said Schully.

COVID also presented an additional unique opportunity for the study since the majority of Marines enrolled in February of 2021 were vaccinated with the Moderna COVID-19 vaccine. Due to the timing and age restrictions during the initial vaccine rollout, this provided the researchers the possibility to expand the study platform even further.

"Once they return from Darwin, we will leverage this unique group to examine the magnitude, durability and trajectory of the immune response to the Moderna COVID-19 Vaccine in this young, healthy American population," said Schully. While the study team is unable to travel to Australia, pre- and post-deployment activities at the Battalion's home base in California have allowed the study to continue to follow the 2020 and 2021 rotations.

"The fact that we are able to continue, while it hasn't been ideal, has been invaluable. Our hope is that 2022 rotation looks more like the pre-pandemic rotations and we can continue. That being said, the 2020 and 2021 rotations have been productive and produced valuable information," said Schully.

MRF-D deploys to Australia and trains to designated expeditionary operation task, enhances U.S.-Australian interoperability, and conducts regional engagement in order to prepare for crisis and contingency response, advance USMC warfighting concepts, enhance regional security, and demonstrate the strength of the U.S.-Australian Alliance.

NMRC's eight laboratories are engaged in a broad spectrum of activity from basic science in the laboratory to field studies at sites in austere and remote areas of the world to operational environments. In support of the Navy, Marine Corps, and joint U.S. warfighters, researchers study infectious diseases, biological warfare detection and defense, combat casualty care, environmental health concerns, aerospace and undersea medicine, medical modeling, simulation and operational mission support, and epidemiology and behavioral sciences. ■

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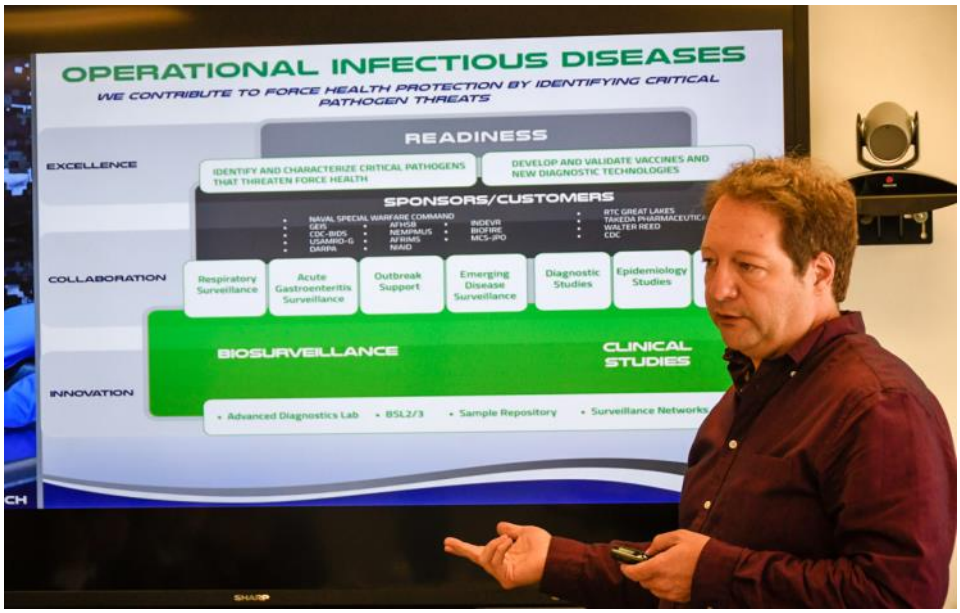
"Implementation of these strategies allowed for increased throughput and decreased turnaround time, vital to contact tracing and pandemic mitigation efforts - a true force multiplier," remarked Capt. Dennis J. Faix, NHRC's commanding officer.

30 DoD laboratories have successfully implemented these FDA-authorized strategies, directly impacting operational readiness across the Services, and vital to controlling the spread of COVID-19 among U.S. military personnel.

Dr. Chris Myers, director of OID, explained that "pooling studies allowed our laboratory to directly impact fleet readiness by rapidly testing thousands of Sailors and Marines. This allowed operational Naval vessels to deploy on schedule with assurances that all efforts to mitigate the COVID-19 pandemic had been taken."



Dr. Chris Myers, director, OID gives a presentation.

NHRC's mission is to optimize the operational readiness and health of our armed forces and families by conducting research, development, testing and evaluation informing DoD policy. NHRC supports military mission readiness with research and development that delivers high-value, high-impact solutions to the health and readiness challenges our military population faces on the battlefield, at sea, on foreign shores and at home. NHRC's team of distinguished scientists and researchers consists of active duty service members, federal civil service employees and contractors, whose expertise includes physiology, microbiology, psychology, epidemiology, and biomedical engineering. ■

Peltier continued from page 7

The MHSRS is an annual four-day Department of Defense meeting that provides a venue for presenting new scientific knowledge resulting from military-unique research and development. The MHSRS is the premier military or civilian meeting that focuses specifically on the unique medical needs of the warfighter. The 2021 meeting was cancelled due to the ongoing pandemic.

Peltier acknowledged the support from everyone at the command in making this award possible. "This award is due, in large part, to the great people around me…that I was lucky to work with as part of my team."

In addition to managing this program, Peltier also took on the urgent tasking to modernize it, which resulted in a more sensitive screening process that better identifies Sailors best suited for submarine duty.

"Peltier was a superb ambassador for Naval Medical Research and Development. He is among the most competent and poised briefers, an excellent researcher, and a strong leader. His work had daily Fleet-wide impact, and I have no doubt that he will continue to demonstrate his leadership skills in his new role. I am proud to have had him as part of the team here at NSMRL," said Shobe.

NSMRL, a command under the Navy Bureau of Medicine and Surgery, is located at the Naval Submarine Base New London. NSMRL delivers research solutions to promote the health, welfare, and performance of submariners and divers, with the mission to sustain the readiness and superiority of our undersea warriors through innovative health and performance research. ■

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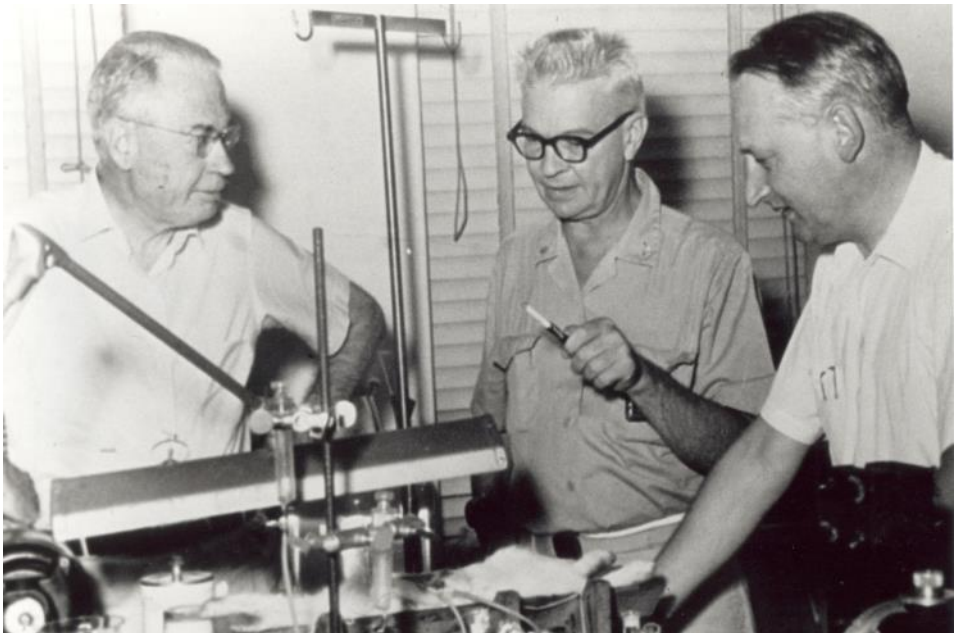
As NAMRU-3 was projecting medical power through "shots in arms," the more foundational work in the fight against cholera was taking place behind the scenes. At the Abbassia Fever Hospital, Phillips and his team embarked on a landmark clinical and laboratory investigation into the disease. By studying cholera patients they were able to estimate "quantitatively the[ir] degree of hydration." This information enabled them to determine the necessary volume and composition of intravenous fluids needed by the patient. Application of this technique helped NAMRU-3 reduce the mortality among cholera patients at the hospital to between 5 and 7.5 percent. As a comparison, the mortality rate for cholera patients not treated by NAMRU-3 during the epidemic was a staggering 50 percent.

NAMRU-3's efforts garnered great attention throughout Egypt. On October 7, 1947, *Le Phare Egyptian*, a local newspaper published an editorial calling the Navy-led effort to vaccinate the country "one of the most spectacular examples of medical cooperation in history."

Dr. Claude Herman Barlow, an American-born scientist employed with the Egyptian Ministry of Health wrote James Forrestal—the newly appointed (and first) U.S. Secretary of Defense—calling attention to the lab's impact on the country: "To my mind NAMRU #3 is the greatest single asset which the USA has ever succeeded in presenting as a goodwill liaison between two countries. It can do more for cordial diplomatic relationships than could be done by years of other diplomatic agencies."

POSTSCRIPT

Perhaps the immediate legacy of NAMRU-3's fight against cholera was the recognition from Egyptian government. On June 28, 1948, Egypt and the United States formalized an agreement recognizing NAMRU-3's status and allowing for construction of a new permanent home on 2.5 acres adjacent to the Abbassia Fever Hospital. The NAMRU-3 headquarters was commissioned on Navy Day, October 27, 1948 and formally dedicated in January 1950.



Phillips at NAMRU-3, undated.

For his efforts in helping to fight the cholera threat, Phillips was awarded the Egyptian Gold Cholera Medal from Dr. Nagib Iskander in 1947.

In 1955, Phillips was promoted to Captain and selected as the commanding officer of the re-activated NAMRU-2, then based in Taipei, Taiwan. It was there that Phillips developed a glucose-based oral rehydration therapy which helped reduce the cholera mortality rate to less than 1 percent. In 1967, Phillips was awarded the prestigious Lasker Prize for his work on cholera—the first U.S. military medical officer recognized with this honor.

Sources.

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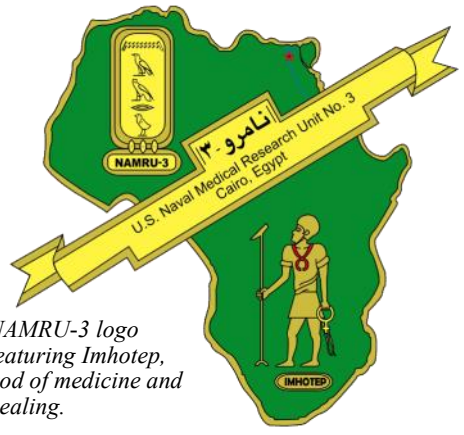
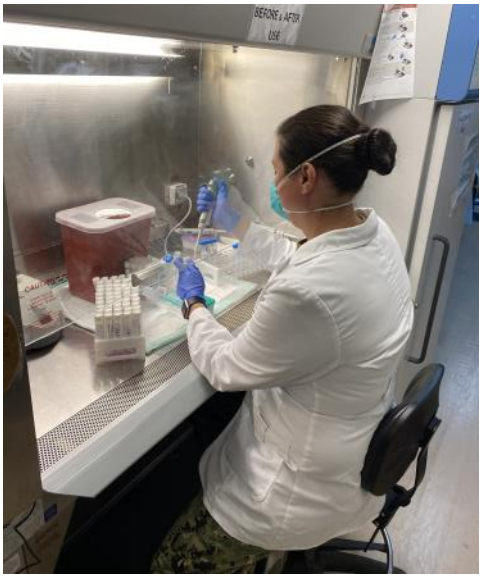


NAMRU-3 logo featuring Imhotep, god of medicine and healing.



Lt. Emily Stefanov working in the forward deployed lab in Dijibouti.

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Stefanov, a native of Anniston, Alabama oversees infectious disease surveillance and research "It is an honor to be selected for lieutenant commander and a privilege to continue to be able to play a role in shaping Navy Medicine research and development." Currently she is deployed at-sea conducting polymerase chain reaction testing for COVID-19. "I'm learning more about shipboard life and getting experiences I never dreamed possible and loving it"

Watters says his time at NAMRU-3 was his most impactful tour. He deployed to Djibouti in support of COVID-19 testing at the only permanent base in Africa. There he worked with local nationals to conduct disease surveillance. "Persisting through the pandemic in Africa, shaped me into a stronger person and better leader, fortified relationships, and altered my perspectives."

Watters left NAMRU-3 and is settling into his new job in the Operations Department at Naval Medical Research Center's Biological Defense Research Directorate in Frederick, Maryland. "This promotion means that others see potential in my ability to lead and make an impact. It is a humbling surprise."

With 22 years of service in the special warfare, staff, and aviation communities, Smith brings a diverse background to NAMRU-3 and Navy Medicine. "There is never an average day as a chief petty officer in the United States Navy. Each day presents new challenges from Sailor engagement, leadership demands, daily Navy requirements, and the ever-changing mission of the command."

Azer, a Minnesota native is NAMRU-3's leading petty officer and supply officer. A problem-solver looking forward to accepting new responsibilities. Along with his fellow chief petty officer selectees, he will spend the next several weeks preparing to join the Chiefs mess.

"There are significant opportunities working in an overseas environment and the NAMRU-3 staff continues to answer the call," added Monteville.

Eggan and Smith both credit supportive and patient families; great leadership and mentors; hard-working Sailors and a little bit of luck for their growing opportunities. NAMRU-3 is a challenging and rewarding tour; a small command with big possibilities. ■

Logistics Specialist 1st Class Azer being fitted for chief petty officer uniforms.

Lt. Chaselynn Watters.

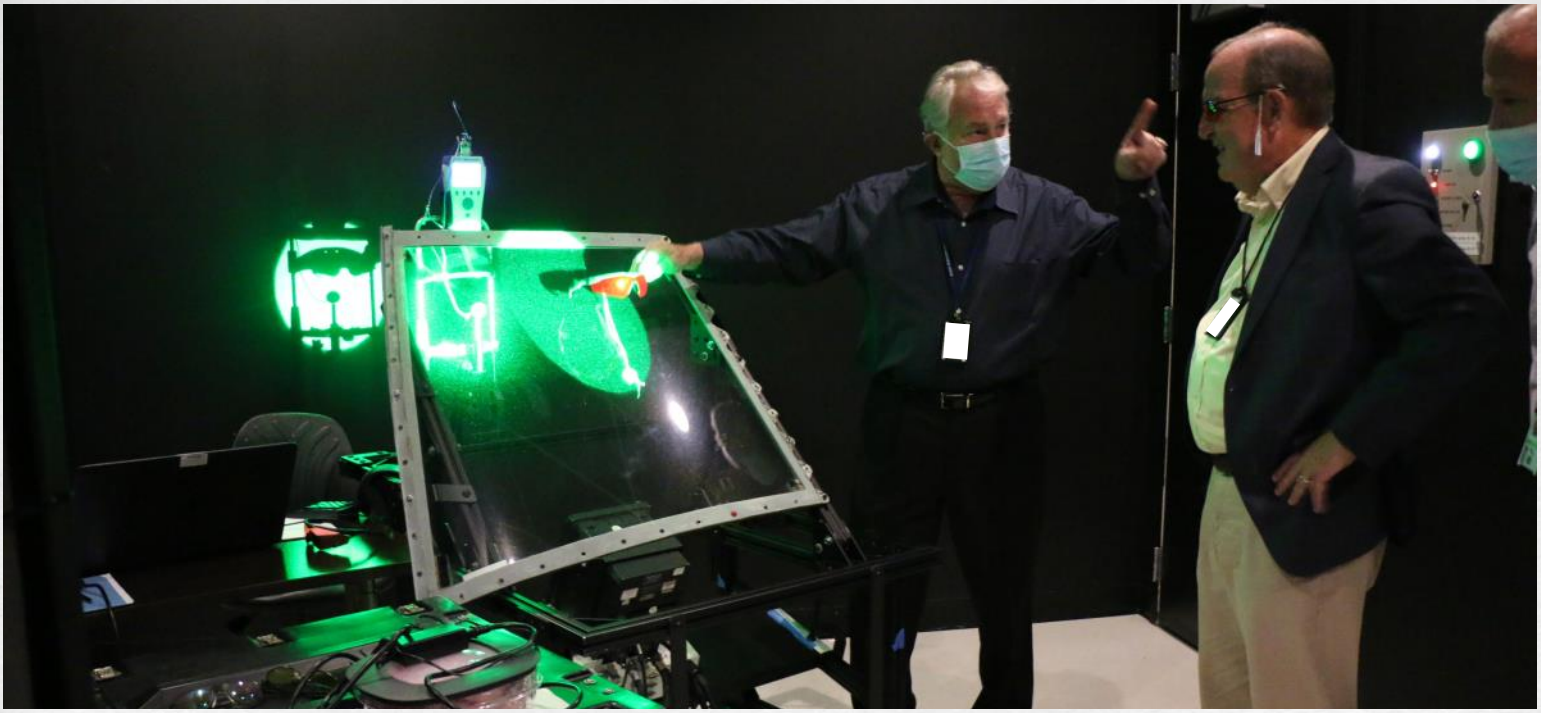
Smith and family.

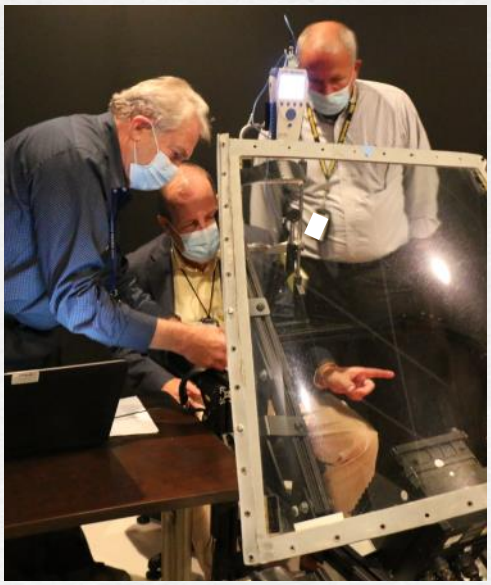
SCOPE NEWS

A closer look at Navy Medicine's R&D enterprise

LIMA, Peru (Oct. 13, 2021) Rear Admiral Mario Cacho Pella, Peruvian Health Director (DISAMAR) and Rear Admiral SN (MC) Sergio Molina Espejo, Director Peruvian Navy Medical Center "Cirujano Mayor Santiago Tavara" along with their staffs joined US Naval Medical Research Unit 6 (NAMRU-6) in celebrating Battle of Angamos Day, which commemorates a famous Peruvian Naval Battle which occurred on 08 October, 1879 and the 246 Birthday of the US Navy. This was the first joint celebration of Battle of Angamos Day and the US Navy Birthday held at NAMRU-6 in its 37 year history. The officers and staffs of the Peruvian and the US Navy enjoyed fellowship and the all important cake! — *LCDR Stephen Lizewski*

SAN ANTONIO (Oct. 14, 2021) Capt. Gerald DeLong (sitting left), commanding officer, Naval Medical Research Unit (NAMRU) San Antonio joined by Executive Officer Capt. Linda Dunn Smith, Chief Science Director Dr. Sylvain Cardin, and Senior Enlisted Leader Senior Chief Hospital Corpsman David Snow visited Brook Army Medical Center to receive their annual influenza or "flu" vaccinations. The flu has the potential to adversely impact force readiness and mission execution. The Centers for Disease Control and Prevention (CDC) recommends a yearly influenza vaccine as the first and most important step in protecting against influenza and its potentially serious complications. Vaccination can reduce influenza illnesses, doctors' visits, missed attendance at work or school and prevent flu -related hospitalizations. NAMRU San Antonio is one of the leading research and development laboratories for the U.S. Navy under the Department of Defense and is one of eight subordinate research commands in the global network of laboratories operating under the Naval Medical Research Center in Silver Spring, Md. Its mission is to conduct gap driven combat casualty care, craniofacial and directed energy research to improve survival, operational readiness, and safety of DOD personnel engaged in routine and expeditionary operations — *Burrell Parmer*





DAYTON, Ohio (Oct. 7, 2021) Retired Air Force Maj. Gen. Henry "Hank" Morrow visited Naval Medical Research Unit-Dayton to tour of the Naval Aerospace Medical Research Laboratory. (NAMRL)

Morrow received a presentation brief by Capt. Walter Daltsch III, commanding officer and Capt. Juliann Althoff, executive officer. The tour including stops of several NAMRL spaces, including the laser lab which included the Laser-Induced Phosphorescence and Glare Study. — *Lexi Tharp*

SAN ANTONIO (Oct. 1, 2021) Cmdr. Linda Dunn Smith, of Philadelphia, the executive officer of Naval Medical Research Unit (NAMRU) San Antonio, has her mother, Myra Grzywacz, place her captain's cover during a promotion ceremony held at the Tri-Service Research Laboratory.

As executive officer, Dunn Smith supports the command's mission to conduct gap-driven combat casualty care, craniofacial, and directed energy research to improve mission and force readiness. — *Burrell Parmer*

LIMA, Peru (Oct. 15, 2021) Capt. Franca Jones, commanding officer, Naval Medical Research Unit 6 presents a Navy and Marine Corps Commendation Medal to Hospital Corpsman 2nd Class Joshua Magdzak. *—LCDR Stephen Lizewski*

SAN DIEGO (Oct. 21, 2021) Capt. Dennis Faix, commanding officer, Naval Health Research Center honors Dr. Chris Myers and the Operational Infectious Diseases Directorate (OID) during an awards ceremony. The OID laboratory team was recently recognized by the Military Health System Research Symposium (MHSRS) for COVID Pandemic-related Outstanding Research Accomplishment-SARS-CoV-2. *— John Marciano*

SILVER SPRING, Md. (Oct. 20, 2021) Chief Hospital Corpsman Jan Marayag, senior enlisted leader, Naval Medical Research Center (NMRC) receives a seasonal flu vaccination. Flu vaccines were administered to military members and beneficiaries during a joint flu shot rodeo with NMRC and the Walter Reed Army Institute of Research. *—Tommy Lamkin*

BETHESDA, Md. (Oct. 18, 2020) Santina Maiolatesi, Yolanda Alcorta and Keishla Morales, staff members at Naval Medical Research Center's (NMRC) Clinical Trials Center (CTC) brief Capt. William Deniston, commander, NMRC during an official visit.. The CTC evaluates vaccines, therapeutics and medical devices in human subjects. *— Tommy Lamkin*

HAPPY BIRTHDAY NAVY

THE SCOPE

MAGAZINE OF NAVAL MEDICAL RESEARCH & DEVELOPMENT